Information for heat pump space heaters and heat pump combination heaters **Warm climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 708M + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	188	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:		-			
Heat pump combination heater:	Yes						

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η_{s}	184	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performan	-		
T j = - 7 °C	Pdh		kW	T j = -7 °C	COPd		1 -
T j = + 2 °C	Pdh	5,8	kW	T j = +2 °C	COPd	2,58	-
T j = + 7 °C	Pdh	3,9	kW	T j = +7 °C	COPd	3,86	_
T j = + 12 °C	Pdh	2,3	kW	T j = +12 °C	COPd	6,18	-
T j = bivalent temperature	Pdh	5,8	kW	T j = bivalent temperature	COPd	2,58	-
T j = operation limit temperature	Pdh	5,8	kW	T j = operation limit temperature	COPd	2,58	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	NA	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	NA	-
Bivalent temperature	T _{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	NA	kW	Cycling interval efficiency	СОРсус	NA	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	ther than activ	re mode		Supplementary heater			-
Off mode	P OFF	0,015	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P_{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	C.N	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2,787	m3/h
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	NA	m3/h
Annual energy consumption	Q _{HE}	1630	kWh	flow rate, outdoor heat exchanger	_	NA	1113/11
For heat pump combination he	ater:						
Declared load profile	NA	Efficiency class		Water heating energy efficiency	η_{wh}	NA	%
Daily electricity consumption	Qelec	NA	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	NA	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

Information for heat pump space heaters and heat pump combination heaters **Warm climate and Low temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 708M + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	247	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:		-			
Heat pump combination heater:	Yes						

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η_{s}	243	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performal part load at indoor temperature 2	-		
	- "						7
Tj=-7°C	Pdh		kW	T j = -7 °C	COPd	2.40	-
Tj=+2°C	Pdh	5,7	kW	T j = +2 °C	COPd	3,40	-
Tj=+7°C	Pdh	3,5	kW	Tj=+7°C	COPd	5,00	-
T j = + 12 °C	Pdh	2,4	kW	T j = +12 °C	COPd	8,51	-
T j = bivalent temperature	Pdh	5,7	kW	T j = bivalent temperature	COPd	3,40	-
T j = operation limit temperature	Pdh	5,7	kW	T j = operation limit temperature	COPd	3,40	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	NA	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	NA	-
Bivalent temperature	T _{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	55	°C
Cycling interval capacity for heating	P _{cych}	NA	kW	Cycling interval efficiency	СОРсус	NA	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	ther than activ	re <u>mode</u>		Supplementary heater			_
Off mode	P OFF	0,015	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	· CK	0,000		1			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3/h
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water		NA	m3/h
Annual energy consumption	Q _{HE}	1237	kWh	flow rate, outdoor heat exchanger	-	IVA	ШЭЛ
For heat pump combination he	ater:						
Declared load profile	NA	Efficiency class		Water heating energy efficiency	$\eta_{\sf wh}$	NA	%
Daily electricity consumption	Qelec	NA	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	NA	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

Information for heat pump space heaters and heat pump combination heaters **Average climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 708M + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:	A+++	-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	155	%			
Equipped with a supplementary heater:	No	Package efficiency class:	A+++	-			
Heat pump combination heater:	No						

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Uni
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	151	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performal part load at indoor temperature 2			
Tj=-7°C	Pdh	4,4	kW	T j = -7 °C	COPd	2,43] -
T j = + 2 °C	Pdh	2,7	kW	T j = +2 °C	COPd	3,82] -
T j = + 7 °C	Pdh	2,0	kW	T j = +7 °C	COPd	4,85	
T j = + 12 °C	Pdh	2,4	kW	T j = +12 °C	COPd	6,16	-
T j = bivalent temperature	Pdh	4,6	kW	T j = bivalent temperature	COPd	2,14	-
T j = operation limit temperature	Pdh	4,6	kW	T j = operation limit temperature	COPd	2,14	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	NA	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	NA	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°(
Cycling interval capacity for heating	P _{cych}	NA	kW	Cycling interval efficiency	СОРсус	NA	_
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°(
Power consumption in modes of	other than activ	e mode		Supplementary heater			-
Off mode	P OFF	0,015	kW	Rated heat output (*)	Psup	0,0	kV
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3,
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	NA	m3,
Annual energy consumption	Q _{HE}	2687	kWh	flow rate, outdoor heat exchanger		NA	1113,
For heat pump combination he	ater:						
Declared load profile	NA	Efficiency class	NA	Water heating energy efficiency	$\eta_{\sf wh}$	NA	%
Daily electricity consumption	Qelec	NA	kWh	Daily fuel consumption	Qfuel	NA	kW
Annual electricity consumption	AEC	NA	kWh	Annual fuel consumption	AFC	NA	G.

Specific precautions and end of life information:

Information for heat pump space heaters and heat pump combination heaters Average climate and Low temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 708M + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:	A+++	-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	202	%			
Equipped with a supplementary heater:	No	Package efficiency class:	A+++	-			
Heat pump combination heater:	No			_			

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	198	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performal part load at indoor temperature	-		
Tj=-7°C	Pdh	4,7	kW	T j = - 7 °C	COPd	3,30] -
T j = + 2 °C	Pdh	2,9	kW	T j = +2 °C	COPd	4,99	-
T j = + 7 °C	Pdh	2,1	kW	T j = +7 °C	COPd	6,24	-
T j = + 12 °C	Pdh	2,4	kW	T j = +12 °C	COPd	8,00	-
T j = bivalent temperature	Pdh	5,0	kW	T j = bivalent temperature	COPd	2,93	-
T j = operation limit temperature	Pdh	5,0	kW	T j = operation limit temperature	COPd	2,93	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	NA	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	NA	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	NA	kW	Cycling interval efficiency	СОРсус	NA	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	other than activ	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,015	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P _{TO}	0,015	kW				•
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	- CA	.,		1			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3/h
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	NA	m3/h
Annual energy consumption	Q _{HE}	2176	kWh	flow rate, outdoor heat exchanger		IVA	1113/11
For heat pump combination he	ater:						
Declared load profile	NA	Efficiency class	NA	Water heating energy efficiency	η_{wh}	NA	%
Daily electricity consumption	Qelec	NA	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	NA	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product as household waste is not permitted.

Information for heat pump space heaters and heat pump combination heaters **Cold climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 708M + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	138	%			
Equipped with a supplementary heater:	No	Package efficiency class:		-			
Heat pump combination heater:	No						

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Un
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η_{s}	134	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performal part load at indoor temperature 2	-		
Tj=-7°C	Pdh	3,7	kW	T j = - 7 °C	COPd	2,93] -
T j = + 2 °C	Pdh	2,4	kW	T j = +2 °C	COPd	4,28] -
T j = + 7 °C	Pdh	2,0	kW	T j = +7 °C	COPd	5,21] .
T j = + 12 °C	Pdh	2,4	kW	T j = +12 °C	COPd	6,45	
T j = bivalent temperature	Pdh	4,3	kW	T j = bivalent temperature	COPd	2,23	-
T j = operation limit temperature	Pdh	3,1	kW	T j = operation limit temperature	COPd	1,57	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	4,1	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	2,09	-
Bivalent temperature	T _{biv}	-13	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	۰(
Cycling interval capacity for heating	P _{cych}	NA	kW	Cycling interval efficiency	СОРсус	NA	
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°(
Power consumption in modes of	ther than activ	e mode		Supplementary heater			_
Off mode	P OFF	0,015	kW	Rated heat output (*)	Psup	2,9	kV
Thermostat-off mode	P_{TO}	0,015	kW				
Standby mode	P_{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		,					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	NA	m3
Annual energy consumption	Q _{HE}	4316	kWh	flow rate, outdoor heat exchanger	_	IVA	1113
For heat pump combination he	ater:						
Declared load profile	NA	Efficiency class	NA	Water heating energy efficiency	$\eta_{\sf wh}$	NA	%
Daily electricity consumption	Qelec	NA	kWh	Daily fuel consumption	Qfuel	NA	kV
Annual electricity consumption	AEC	NA	kWh	Annual fuel consumption	AFC	NA	G

Specific precautions and end of life information:

Information for heat pump space heaters and heat pump combination heaters **Cold climate and Low temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 708M + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	171	%			
Equipped with a supplementary heater:	No	Package efficiency class:		-			
Heat pump combination heater:	No						

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η_{s}	167	%
Declared capacity for heating for	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performan	nce or prima	ry energy rat	io for
and outdoor temperature T j				part load at indoor temperature 2	20 °C and ou	tdoor tempe	rature T
T j = - 7 °C	Pdh	3,7	kW	T j = -7 °C	COPd	3,63] -
T j = + 2 °C	Pdh	2,3	kW	T j = +2 °C	COPd	5,20] -
T j = + 7 °C	Pdh	2,1	kW	T j = +7 °C	COPd	6,74	<u> </u> -
T j = + 12 °C	Pdh	2,4	kW	T j = +12 °C	COPd	8,04	-
T j = bivalent temperature	Pdh	4,6	kW	T j = bivalent temperature	COPd	2,89	-
T j = operation limit	Pdh	2.6	kW	T j = operation limit	COPd	2.25	
temperature	Pull	3,6	KVV	temperature	СОРИ	2,25	_
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	4,4	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	2,69	-
Bivalent temperature	T _{biv}	-13	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	NA	kW	Cycling interval efficiency	СОРсус	NA	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	ther than activ	e mode		Supplementary heater			_
Off mode	P OFF	0,015	kW	Rated heat output (*)	Psup	2,4	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3/h
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	NA	m3/h
Annual energy consumption	Q _{HE}	3484	kWh	flow rate, outdoor heat exchanger	_	NA	1113/11
For heat pump combination he	ater:						
Declared load profile	NA	Efficiency class	NA	Water heating energy efficiency	$\eta_{\sf wh}$	NA	%
Daily electricity consumption	Q_{elec}	NA	kWh	Daily fuel consumption	Q_{fuel}	NA	kWh
Annual electricity consumption	AEC	NA	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

Information for heat pump space heaters and heat pump combination heaters **Warm climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 708N	I + CTC EcoZenith i360		
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	188	%
Equipped with a supplementary heater:	Yes	Package efficiency class:		-
Heat pump combination heater:	Yes			

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η_{s}	184	%
Declared capacity for heating and outdoor temperature T j	for part load at i	ndoor temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = - 7 °C	Pdh		kW	T j = - 7 °C	COPd] -
T j = + 2 °C	Pdh	5,8	kW	T j = +2 °C	COPd	2,58	-
T j = + 7 °C	Pdh	3,9	kW	T j = +7 °C	COPd	3,86	-
T j = + 12 °C	Pdh	2,3	kW	T j = +12 °C	COPd	6,18	-
T j = bivalent temperature	Pdh	5,8	kW	T j = bivalent temperature	COPd	2,58	-
T j = operation limit temperature	Pdh	5,8	kW	T j = operation limit temperature	COPd	2,58	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	NA	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	NA	-
Bivalent temperature	T _{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	NA	kW	Cycling interval efficiency	СОРсус	NA	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than activ	e mode		Supplementary heater			_
Off mode	P OFF	0,015	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P_{TO}	0,015	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items				1			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3/h
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	NA	m3/h
Annual energy consumption	Q _{HE}	1630	kWh	flow rate, outdoor heat exchanger		107	
For heat pump combination he	eater:						
Declared load profile	XL	Efficiency class		Water heating energy efficiency	η_{wh}	116	%
Daily electricity consumption	Qelec	7	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1445	kWh	Annual fuel consumption	AFC	NA	GJ
		The packaging mu	ust be deposited	at a recycling station or with the installation eng	gineer for correc	t waste manager	nent. At the

Specific precautions and end of life information:

Information for heat pump space heaters and heat pump combination heaters **Warm climate and Low temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 708M	+ CTC EcoZenith i360		
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	247	%
Equipped with a supplementary heater:	Yes	Package efficiency class:		-
Heat pump combination heater:	Yes			

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η_s	243	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor tempera	ture 20 °C	Declared coefficient of performa part load at indoor temperature	•		
Tj=-7°C	Pdh		kW	T j = - 7 °C	COPd		-
T j = + 2 °C	Pdh	5,7	kW	T j = +2 °C	COPd	3,40	-
T j = + 7 °C	Pdh	3,5	kW	T j = +7 °C	COPd	5,00	-
T j = + 12 °C	Pdh	2,4	kW	T j = +12 °C	COPd	8,51	-
T j = bivalent temperature	Pdh	5,7	kW	T j = bivalent temperature	COPd	3,40	-
T j = operation limit temperature	Pdh	5,7	kW	T j = operation limit temperature	COPd	3,40	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	NA	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	NA	-
Bivalent temperature	T _{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	55	°C
Cycling interval capacity for heating	P _{cych}	NA	kW	Cycling interval efficiency	СОРсус	NA	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	ther than activ	e mode		Supplementary heater		•	•
Off mode	P _{OFF}	0,015	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3/h
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	NA	m3/h
Annual energy consumption	Q _{HE}	1237	kWh	flow rate, outdoor heat exchanger		102	1113/11
For heat pump combination he	ater:	-		<u> </u>		-	-
Declared load profile	XL	Efficiency class		Water heating energy efficiency	$\eta_{\sf wh}$	116	%
Daily electricity consumption	Qelec	6,570	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1445	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

Information for heat pump space heaters and heat pump combination heaters **Average climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 708N	1 + CTC EcoZenith i360		
Air-to-water heat pump:	Yes	Energy efficiency class:	A+++	-
Water-to-water heat pump:	No	Controller class:	VI	=
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	155	%
Equipped with a supplementary heater:	Yes	Package efficiency class:	A+++	-
Heat numn combination heater:	Ves			

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	151	%
Declared capacity for heating and outdoor temperature T j	for part load at i	ndoor tempera	ture 20°C	Declared coefficient of performa part load at indoor temperature			
Tj=-7°C	Pdh	4,4	kW	T j = - 7 °C	COPd	2,43] -
T j = + 2 °C	Pdh	2,7	kW	T j = +2 °C	COPd	3,82	-
T j = + 7 °C	Pdh	2,0	kW	T j = +7 °C	COPd	4,85	-
T j = + 12 °C	Pdh	2,4	kW	T j = +12 °C	COPd	6,16	-
T j = bivalent temperature	Pdh	4,6	kW	T j = bivalent temperature	COPd	2,14	-
T j = operation limit temperature	Pdh	4,6	kW	T j = operation limit temperature	COPd	2,14	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than activ	e mode	•	Supplementary heater			
Off mode	P OFF	0,015	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P _{TO}	0,015	kW			•	•
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	- CA	.,	l	1			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3/h
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	NA	m3/h
Annual energy consumption	Q _{HE}	2687	kWh	flow rate, outdoor heat exchanger		IVA	1113/11
For heat pump combination he	eater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	99	%
Daily electricity consumption	Qelec	7,700	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1694	kWh	Annual fuel consumption	AFC	NA	GJ
		The packaging mi	ust be deposited	at a recycling station or with the installation eng	gineer for correc	t waste manager	nent. At the

Specific precautions and end of life information:

end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product as household waste is not permitted.

Information for heat pump space heaters and heat pump combination heaters Average climate and Low temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 708N	1 + CTC EcoZenith i360		
Air-to-water heat pump:	Yes	Energy efficiency class:	A+++	-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	202	%
Equipped with a supplementary heater:	Yes	Package efficiency class:	A+++	-
Heat nump combination heater:	Yes			

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	198	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performal part load at indoor temperature 2	-		
Tj=-7°C	Pdh	4,7	kW	T j = - 7 °C	COPd	3,30	-
T j = + 2 °C	Pdh	2,9	kW	T j = +2 °C	COPd	4,99	-
T j = + 7 °C	Pdh	2,1	kW	T j = +7 °C	COPd	6,24] -
T j = + 12 °C	Pdh	2,4	kW	T j = +12 °C	COPd	8,00	-
T j = bivalent temperature	Pdh	5,0	kW	T j = bivalent temperature	COPd	2,93	-
T j = operation limit temperature	Pdh	5,0	kW	T j = operation limit temperature	COPd	2,93	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	NA	kW	Cycling interval efficiency	СОРсус	NA	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	other than activ	e mode		Supplementary heater			_
Off mode	P OFF	0,015	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P_{TO}	0,015	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	- CA	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3/h
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	NA	m3/h
Annual energy consumption	Q _{HE}	2176	kWh	flow rate, outdoor heat exchanger		NA	1113/11
For heat pump combination he	ater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	$\eta_{\sf wh}$	99	%
Daily electricity consumption	Qelec	7,700	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1694	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product as household waste is not permitted.

Information for heat pump space heaters and heat pump combination heaters **Cold climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 708N	/I + CTC EcoZenith i360			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VI	-	
Brine-to-water heat pump:	No	Controller contribution:	4	%	
Low-temperature heat pump:	No	Package efficiency:	138	%	
Equipped with a supplementary heater:	Yes	Package efficiency class:		-	
Heat pump combination heater:	Yes				

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η_s	134	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	cure 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = -7 °C	Pdh	3,7	kW	T j = -7 °C	COPd	2,93] -
T j = + 2 °C	Pdh	2,4	kW	T j = +2 °C	COPd	4,28	-
T j = + 7 °C	Pdh	2,0	kW	T j = +7 °C	COPd	5,21	_
T j = + 12 °C	Pdh	2,4	kW	T j = +12 °C	COPd	6,45	-
T j = bivalent temperature	Pdh	4,3	kW	T j = bivalent temperature	COPd	2,23	-
T j = operation limit temperature	Pdh	3,1	kW	T j = operation limit temperature	COPd	1,57] -
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	4,1	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd	2,09	-
Bivalent temperature	T _{biv}	-13	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	ther than activ	re mode		Supplementary heater		•	•
Off mode	P OFF	0,015	kW	Rated heat output (*)	Psup	2,9	kW
Thermostat-off mode	P _{TO}	0,015	kW			•	
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	C.N	7,222					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3/h
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	4316	kWh	flow rate, outdoor heat exchanger		110	1113/11
For heat pump combination hea	ater:			, , · · · · · ·			
Declared load profile	XL	Efficiency class		Water heating energy efficiency	$\eta_{\sf wh}$	84	%
Daily electricity consumption	Qelec	9,070	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1995	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

Information for heat pump space heaters and heat pump combination heaters **Cold climate and Low temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 708M	+ CTC EcoZenith i360		
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	171	%
Equipped with a supplementary heater:	Yes	Package efficiency class:		-
Heat pump combination heater:	Yes			

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η_{s}	167	%
Declared capacity for heating for	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performan	nce or prima	ry energy rat	io for
and outdoor temperature T j				part load at indoor temperature 2	20 °C and ou	tdoor tempe	rature 1
T j = - 7 °C	Pdh	3,7	kW	T j = - 7 °C	COPd	3,63] -
Г j = + 2 °C	Pdh	2,3	kW	T j = +2 °C	COPd	5,20] -
T j = + 7 °C	Pdh	2,1	kW	T j = +7 °C	COPd	6,74	_
T j = + 12 °C	Pdh	2,4	kW	T j = +12 °C	COPd	8,04	-
T j = bivalent temperature	Pdh	4,6	kW	T j = bivalent temperature	COPd	2,89	-
T j = operation limit	Pdh	2.6	kW	T j = operation limit	COPd	2.25	
temperature	Pun	3,6	KVV	temperature	СОРИ	2,25	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	4,4	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	2,69	-
Bivalent temperature	T _{biv}	-13	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P cych	NA	kW	Cycling interval efficiency	СОРсус	NA	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	other than activ	e mode		Supplementary heater			-
Off mode	P OFF	0,015	kW	Rated heat output (*)	Psup	2,4	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P_{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2787	m3/h
Sound power level, indoors/ outdoors	L _{WA}	NA / 46	dВ	For water-/brine-to-water heat pumps: Rated brine or water	_	NA	m3/h
Annual energy consumption	Q _{HE}	3484	kWh	flow rate, outdoor heat exchanger		IVA	1113/11
For heat pump combination he	ater:					_	
Declared load profile	XL	Efficiency class		Water heating energy efficiency	η_{wh}	84	%
Daily electricity consumption	Q_{elec}	9,07	kWh	Daily fuel consumption	Q_{fuel}	NA	kWh
Annual electricity consumption	AEC	1995,4	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information: